CHAPTER 9: PLAN IMPLEMENTATION AND EVALUATION

The *Connections 2040 MTP* features several implementation mechanisms that help ensure progress is made toward addressing the regional goals and pathways that guide the transportation planning process. As it is first and foremost a transportation plan, these initiatives focus specifically on transportation strategies, project development, and the programming of transportation dollars.

This chapter describes the key mechanisms for implementing the *Connections 2040 MTP* and guiding the region toward the MTP goals and Target Scenario. Existing MRMPO programs, documents, plans, and policies that help work toward implementation are described, and recommended strategies and projects that could help achieve the MTP goals and steer the region toward the Target Scenario are laid out as well. Environmental justice is also addressed in this chapter, and the ways in which MRMPO works to integrate environmental justice concerns into its planning process, and assess progress made in that regard. The chapter concludes with a look at the potential next steps for MRMPO and regional partners that should be taken on the path to implementation, including continuing efforts on integrating Target Scenario guiding principles into local and regional plans and projects.

Local Collaboration

It is important to note that while there are some actions MRMPO can do on its own to implement the MTP, meeting the goals of the MTP and the principles of the Target Scenario requires collaboration among local governments and planning partners in the AMPA. Agencies in the region must incorporate the principles of this plan into internal processes, policies, and plans as appropriate in order to fully realize its benefits.

9.1 Target Scenario Integration and Performance Measures

The Target Scenario evolved during the last *Futures 2040* MTP and continues to play a major role in the development of the MTP this time around. The Target Scenario is updated with land use partners in the region and creates a necessary link between transportation and land use planning policy and professionals. When these two disciplines are not coordinated the strain on our economy, health, and environment is much greater.

Through scenario planning we have the opportunity as a region to discuss a shared vision and make concrete steps towards growing smarter, which in turn enables us to plan more efficient transportation systems and reduce trips and travel delays. This MTP the Target Scenario was further refined in terms of both its Guiding Principles and the location of regional Activity Centers. A greater emphasis was put on a core transit network that increases frequency on these routes in the region. These routes were selected because they connect areas of higher housing and jobs densities with communities that need transit service. Unfortunately, as was made clear in the transit section of the document, trying to cover all areas of the region with transit is just not possible nor cost effective and weakens the routes that are most needed.

The Performance Measures make clear the benefits of the Target Scenario.

See Chart.

Add Summary.

Aspects of the Target Scenario help determine the types of implementation measures that would benefit the region and bring us closer to the goal of achieving the Target Scenario. Provided here are concrete implementation measures that are in line with both the geographic locations of the Target Scenario (activity centers and transit) and the guiding principles.

Add action items.

9.2 Existing Programs, Documents, Plans, and Policies

The MTP is implemented in various ways, including through existing MPO programs that help administer the continuing, comprehensive, and collaborative long-range transportation planning process and documents that result from such programs. Key MPO programs, documents, plans, and policies that aid in the MTP implementation are discussed below.

a. Transit Mode Share Goal and TIP Set Aside

Transit policy measures including mode share goals and a funding set-aside were adopted by the Metropolitan Transportation Board in previous MTP development efforts. MRMPO's policy body, the Metropolitan Transportation Board, adopted a resolution that calls for 20 percent of all trips along a priority network to be taken by transit by 2040. Along with these mode share goals, a TIP set-aside was adopted that requires a minimum of 25 percent of certain federal funds (currently STP-Large Urban) that are programmed through the TIP be directed toward transit projects that expand service along the priority network (see [Priority Transit Network]Map X-x, page X).

While the mode share goals and TIP set-aside are important initiatives, they must be complemented by an integrated vision for land use and infrastructure investments in order to succeed. To help accomplish this, elements of the Priority Transit Network has been added to the Target Scenario as a part of this MTP.

b. Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a federally-mandated short-term plan that programs funding for transportation projects in the metropolitan area. In order for a project in the Albuquerque Metropolitan Planning Area (AMPA) to receive federal highway or transit funding, it must first be included in the TIP (and before that must be included in or be consistent with the MTP, making the TIP the near-term implementation program for the long-range plan).

The TIP must also include non-federally funded projects that are considered "regionally significant." In short, the TIP document functions as the region's mechanism for allocating limited funding resources among various transportation needs and serves as a tool for transportation professionals and the general public to track the use of local, state, and federal transportation dollars.

The TIP covers a six-year period, with the first four years constituting the "Federal TIP" (or the federally-mandated portion) plus two informational years. A "new" TIP is developed every two years by adding the next two subsequent fiscal years. Each fiscal year must be fiscally constrained, meaning that the amount of funds programmed must not exceed the amount of funds estimated to be available in each year.

TIP Development

The TIP is developed by MRMPO staff in coordination with the Transportation Program Technical Group (TPTG) using the process established in the *TIP Policies and Procedures* manual. The TIP is then adopted by the Metropolitan Transportation Board of the MRMPO after considering any recommendations of the Transportation Coordinating Committee and after there has been opportunity provided for public comment on the draft document. Once approved by the MTB, the TIP is transmitted to the NMDOT for inclusion, without modification, into the Statewide Transportation Improvement Program (STIP) followed by final approval from the Federal Highway Administration and the Federal Transit Administration.

Relationship Between the TIP and the MTP

The MTP is a minimum twenty-year multimodal long-range transportation plan that provides a framework for development of the associated TIP. The *2040 Connections MTP* will serve as the AMPA's roadmap to guide transportation investments and decisions regarding transit enhancements and expansions, bicycle and pedestrian improvements, transportation demand management strategies, Intelligent Transportation System enhancements, and various roadway improvements. Those needs are translated into implementable projects and programmed for federal funds by means of the TIP. While the MTP establishes the goals and framework, the TIP serves as a tool for program and project implementation.

FAST Act TIP Requirements

The current federal transportation authorization bill, the FAST Act, along with the federal regulations, lists requirements for a TIP:

- A TIP shall contain projects consistent with the current metropolitan transportation plan
- A TIP, once implemented, is designed to make progress toward achieving the performance targets
- A TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the transportation improvement program toward achieving the performance targets established in the metropolitan transportation plan, linking investment priorities to those performance targets

To ensure that the TIP implements the MTP, makes progress toward achieving performance targets, and achieves a performance-based approach, each of the MTP goals has been evaluated and linked to one or more of the national goals set forth by current transportation legislation. This ensures that MRMPO's transportation planning and programming processes are inherently performance-based. It is important to note that each individual project will not always align with or satisfy every established performance measure perfectly to allow for, ultimately, achieving adopted targets. Because of this reality, MRMPO's goal is to implement a program of projects that will collectively focus on improving surface transportation in the AMPA by focusing our efforts on:

- Improving pavement and bridge conditions
- Improving system performance and reducing traffic congestion AMPA-wide
- Decreasing serious injuries and fatalities
- Reducing on-road mobile source emissions
- Improving freight movement throughout the AMPA

It is through these efforts above in which the Transportation Improvement Program can collectively make an impact in transforming the Federal Aid Highway Program towards a performance-based approach.

c. The Project Prioritization Process (PPP)

The Project Prioritization Process is used to prioritize and select projects from the MTP for funding through the TIP. Overall, the PPP helps establish a short-range TIP that implements the long-range transportation plan's goals and objectives while adhering to and linking investment priorities to national performance goals, measures, and adopted targets. In developing a new TIP, local agencies submit project proposals to MRMPO staff that are scored and ranked through the PPP. The PPP is structured to prioritize projects which best meet the four goals of the MTP.

Multifaceted projects that address a number of MTP goals and target key geographic areas identified in the MTP generally receive higher scores. Additionally, each agency proposing projects may provide further qualitative information to aid in the assessment of the various project proposals (e.g., the value of the project to the region, the community, or potential impacts) and to help determine which projects should ultimately be programmed in the TIP. In practice, the project scores and ranking tables utilized in the PPP have emerged as a valuable tool and have resulted in an increase in funding for regionally significant and beneficial projects.

The PPP is updated with each TIP cycle as new data becomes available and new policies are introduced. New crash rate, traffic volume, and travel time data are available each year and are utilized in project evaluation to ensure projects are evaluated on the most recently observed transportation conditions. Every four years new socioeconomic data is developed as part of the MTP update. This includes base year population and employment estimates as well as updated projections. Updated socioeconomic data is also used when available.

d. Long Range Transportation Systems (LRTS) Guide

The LRTS Guide provides design guidance for new and reconstructed roadways to work toward a more complete, connected, and safe transportation system that meets the needs for users of all transportation modes. MRMPO developed the LRTS Guide to respond to the growing need for transportation networks to become more efficient at addressing congestion, providing multimodal options for all users, supporting economic development, and improving public health.

The LRTS Guide incorporates multimodal accommodations guidance based on national best practices. The intent for future roadways is to find the minimum right-of-way needed for good multi-modal accommodation, and to design transportation networks that support adjacent land uses. In this way, the LRTS Guide supports MTP goals including Optimized Mobility, Active Transportation, Economic Linkages, and Environmental Resiliency. In addition, the LRTS Guide supports the Target Scenario by linking more coordinated land use and transportation planning as well as appropriate design standards to enhance the propensity for bicycle and pedestrian trips. Complete Streets

The LRTS Guide also serves to implement the Complete Streets Resolution (R-11-09) passed by the Metropolitan Transportation Board in 2011 which called for updating documents and policy to integrate Complete Streets One of the key findings of the *2035 MTP* was that the strategy of adding roadway capacity was not sufficient to address congestion across the AMPA. The good news is there are promising strategies that not only address congestion but that also have economic and health benefits. These strategies involve developing Complete Streets by integrating land use and transportation planning to improve conditions for all users.

Long Range Systems Maps

Foundational to the LRTS Guide are a series of system maps: the Long Range Roadway System, the Long Range Bikeway System, and the Long Range Transit Network. By showing where future roadways, bikeways, and transit lines are planned and desired, the region can better assess connectivity needs and ensure complete and efficient networks are developed.

The LRTS Guide supports the *Connections 2040* MTP and the principles of the Target Scenario by providing a means to look at transportation and land use together while also integrating Complete Streets principles, particularly for activity centers where trips taken by transit, walking, and bicycling are encouraged. The Target Scenario is supported by a growing desire to foster public spaces where people like to congregate, and the LRTS Guide provides recommendations based on nationally recognized practices on how to make streets more inviting.

Instead of creating a parallel effort, the LRTS Guide identifies a range of opportunities and provides recommendations for network connectivity, multi-modal accommodation, land use integration at a variety of development levels, and can inform master plans, corridor studies, and individual roadway projects. It is in this way that the LRTS Guide weaves the principles of the Target Scenario into current planning efforts.

Multimodal Needs

Nationally recognized guidance is included and referenced in the LRTS Guide. There is an evolving understanding of multimodal needs, and communities are creating new ways to improve walking, transit and bicycling conditions. Often minimum design recommendations do not provide sufficient levels of comfort for people to consider changing modes. The LRTS Guide helps to prioritize locations where roadway design needs to go beyond minimum accommodations for different modes. For example, activity centers where pedestrian travel is prioritized involves slowing down motorized traffic, providing wider sidewalks, and including street trees to help people choose to walk over driving to destinations within the activity center. Minimum design recommendations would not necessarily have achieved such desired outcomes.

These components are the main mechanisms that the LRTS Guide uses to implement the principles of the Target Scenario as well as integrate land use and transportation planning and provide multi-modal accommodation. The Guide is part of the *Connections 2040* MTP but is also a standalone document. The LRTS Guide has been updated concurrently with the *Connections 2040* MTP and includes updated information and guidance on green infrastructure, intersection design, and road diet applications.

e. Regional Transportation Safety Action Plan (RTSAP)

The RTSAP is a regional comprehensive safety plan that serves as a mechanism for implementing safety policy and street improvements in the AMPA. The latest crash data that is available from the New Mexico Department of Transportation was used for analysis, and the focus of the plan was on determining where fatalities and injuries occurred for walking, biking, motor vehicle, and motorcycle travel.

A highlight of the plan is the High Fatal and Injury Network or HFIN, which ranks both intersection and street segments in the AMPA that are above average, and therefore guides the region on how to better prioritize projects where safety improvements should be made so that they have the greatest impact on preventing fatalities and serious injuries. The plan was adopted by the MTB in 2018 and is much more extensive than previous crash reports. The RTSAP includes a greater safety vision for the region emulated on the Vision Zero belief that traffic fatalities and injuries are not inevitable side effects of the transportation system. Vision Zero takes a proactive stance and recommends strategies to prevent crashes from happening in the first place by prioritizing traffic safety.

The RTSAP is a more elaborative planning effort than previously taken on by MRMPO that expands data analysis, identifies safety emphasis areas, and provides improved action items to prevent future crashes. Top contributing factors to crashes, alcohol involvement, and types of pedestrian crashes were also evaluated. In addition to data analysis, MRMPO also expanded agency and public input, conducted field visits in both urban and rural areas, and incorporated national best practice research as part of the plan development. The RTSAP emphasizes the need to prioritize safety over speed and recommends the adoption of Vision Zero policy.

f. Congestion Management Process (CMP) Corridor Rankings

The CMP is an ongoing mechanism for discussing regional transportation challenges and identifying strategies for managing congestion by location. A primary function of the CMP is to evaluate the effectiveness of transportation strategies and coordinate regional transportation decision making. Corridors are ranked about every two years. Rankings are based on peak hour traffic volume, average peak hour travel speed, and crash rates. The rankings provide an in-depth analysis of the source and extent of congestion along corridors. They assist local agencies in identifying transportation needs and are used by MRMPO to help determine which projects should receive federal funding. The rankings are used to highlight which corridors could use the most attention for addressing congestion and for ranking projects in the Project Prioritization Process (projects along more congested corridors receive more prioritization points).

g. Incident Management Plan (IMP)

Incident Management Plans help implement congestion management (narrowly) and the Optimized Mobility goal of the MTP (broadly) in the AMPA. IMPs help reduce travel delay due to incidents and improve safety before and after an incident. The ITS Subcommittee will soon be facilitating the development of an AMPA-specific IMP which will foster inter-agency coordination on recurring and non-recurring congestion and incidents, which is key in our region's "congestion toolbox."

h. Intelligent Transportation Systems Architecture (ITS)

The Albuquerque Metropolitan Planning Area Regional ITS Architecture Addendum document establishes a regional framework for coordinated ITS deployment for projects within the AMPA. The document serves as a "consensus blueprint" for all ITS deployment to help meet the identified transportation needs of the region. A subsequent addendum integrates the planned ITS architecture into MRCOG's transportation planning and project programming process by making the ITS consideration part of MTP and TIP project review. In other words, projects approved to receive federal funding through the TIP are reviewed by the ITS Subcommittee for consistency with the AMPA Regional ITS Architecture. In addition, the ITS Subcommittee monitors and evaluates ITS implementation across all jurisdictions to help ensure ITS infrastructure is deployed in a systematic way throughout the region.

i. Development Review

MRMPO has a development review process it carries out for proposed land use development projects in the City of Albuquerque. MRMPO staff review proposed projects for consistency with the MTP and the principles of the Target Scenario and write summaries of their findings that are considered as the project goes through the local review and approval process.

j. Fiscal Indicator Tool

In 2019 MRMPO worked with a consultant team to build a Fiscal Indicator Tool (FIT), which is a model that calculates the major capital and ongoing operation and maintenance costs of public infrastructure under difference future growth scenarios. The FIT is a complement to MRMPO's existing analytical toolbox which includes a travel demand model (CUBE), a land use model (UrbanSim), an accessibility model (TRAM), and an economic model (REMI). These models help to implement the MTP by simulating 'what if' scenarios in regards to infrastructure or policy alternatives and generating performance measures that allow us to anticipate the future transportation, land use, and economic impacts. The FIT estimates select public costs associated with different growth patterns and land use policies which supports policy-makers in their efforts to make the most efficient use of limited municipal resources.

k. Central New Mexico Climate Change Scenario Planning Project

As part of the *Futures 2040 MTP*, the Central New Mexico Climate Change Scenario Planning Project was undertaken. A product from this project was the document, "Integration Plan for the Mid-Region Council of Governments: Central New Mexico Climate Change Scenario Planning Project," which included potential implementation strategies that could be employed by MRCOG and its partners to adapt regional policies, programs, and data collection procedures to further environmental protection, climate change mitigation and adaptation.

9.3 Environmental Justice Concerns

Environmental justice refers to the "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[1] In particular, environmental justice addresses how low-income and minority populations are affected by government actions, including transportation decisions made as part of the metropolitan transportation planning process. The *Connections 2040 MTP* plays an important role in environmental justice by analyzing existing conditions and considering how transportation investments can improve access for low-income and historically marginalized communities.

The three fundamental principles of environmental justice are:

1. Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations
2. Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
3. Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

a. Title VI of the Civil Rights Act

Environmental justice programs stem from Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color or national origin and specifies that recipients of federal funds must certify nondiscrimination. Environmental justice requirements were first issued in 1994 Presidential Executive Order 12898, which directed every federal agency to make environmental justice part of its mission by identifying and addressing all effects of programs, policies and activities on minority and low-income populations.

In 1997, the U.S. Department of Transportation expanded upon the requirements of the 1994 environmental justice Executive Order and clarified the role and responsibilities for transportation decisions makers relating to environmental justice. **In 1999, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) issued a memorandum providing guidance for implementing Title VI requirements in metropolitan and statewide transportation planning**.

Therefore, the metropolitan transportation planning process must comply with both environmental justice and Title VI requirements. The federal requirements which MRMPO must follow include:

- Ensuring that the MTP and the TIP comply with Title VI of the Civil Rights Act.
- Identifying residential, employment, and transportation patterns of low-income and minority populations so that those populations' needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed.
- Evaluating and improving MRMPO's public involvement processes where necessary to eliminate participation barriers and to engage minority and low-income populations in transportation decision-making.

[1] Environmental Protection Agency, http://www.epa.gov/environmentaljustice/

Limited English Proficient (LEP)

In addition to environmental justice and Title VI requirements, MRMPO must also comply with Executive Order 13166, which requires the organization to take reasonable steps to ensure that Limited English Proficient (LEP) persons have access to programs, services, and information provided by MRMPO. Limited English Proficient persons are persons who do not speak English as their primary language and have a limited ability to read, speak, write, or understand English.

b. Environmental Justice Assessments

The *2040 MTP* primarily addresses environmental justice by assessing where low-income and minority populations reside and how those populations are served by the transportation network - particularly the transit network, within the AMPA. MRMPO analyzed locations with relatively high concentrations of environmental justice populations based on minority status and household poverty level using 2014-2018 American Community Survey data. The following map highlights census tracts that scored high on the EJ Index[2] showing where concentration of both household poverty and minority status are highest. The results of the index analysis give an idea of where in the AMPA there might be environmental justice concerns. The highest concentrations in the AMPA are in areas within the City of Albuquerque, including the Southeast Heights, the South Valley, and the Southwest Mesa.

Housing and Transportation Costs

While household income and minority status are the traditional measures of environmental justice, affordability is increasingly understood to be part of the transportation planning process. In recent years, federal agencies and research groups have placed an emphasis on analyzing combined housing and transportation costs.[3] Such analysis reveals locations within the AMPA that, while not necessarily considered environmental justice communities, are subject to affordability concerns as median household income in many neighborhoods is insufficient to meet the housing and transportation costs in the area. For more on this, see the Housing and Transportation Affordability section in Chapter 6.

Environmental justice considerations have been incorporated into important products used in regional transportation decision-making. This includes the Project Prioritization Process, which helps prioritize which projects will be selected to receive federal funding.

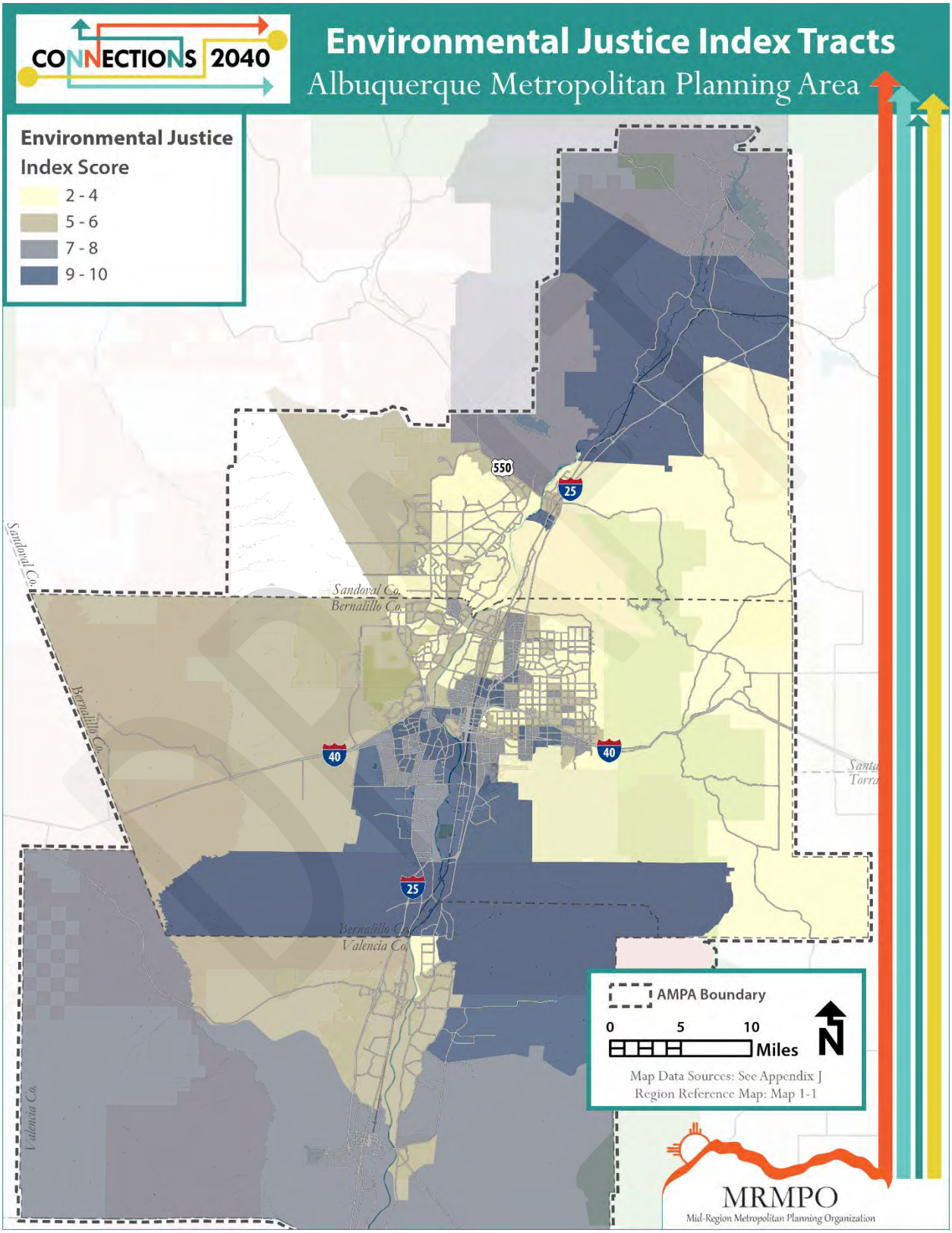
Project Prioritization Process

The Project Prioritization Process, which informs how projects are selected for inclusion in the TIP, uses environmental justice criteria as a scoring factor, awarding points to projects if they are located within or adjacent to identified environmental justice communities **Because such an analysis cannot be performed during the Project Prioritization Process, the assumption is made that a project will benefit rather than burden the adjacent community.** However, explanation of the project's impacts to adjacent communities is also required. For the *2040 MTP*, a map was developed (see following pages) to show the location of roadway capacity expansion projects in relation to the environmental justice communities. Further analysis could be conducted by examining concentrations of elderly, children, seniors, the disabled and similar population groups that are subject to potential adverse impacts.

[2] Using "natural breaks" in five classes, percentage of census tract population of ethnicities considered "minorities" and individuals with 12 months of income below the poverty level were used to assign a corresponding score between 1 and 5, with the resulting scores combined to produce an overall "environmental justice score" for each tract.

[3] See the Department of Housing and Urban Development Location Affordability Index and the Housing and Transportation Affordability Index developed by the Center for Neighborhood Technologies.

Map 9-1: Environmental Justice Index



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Access to Transit, Parks, and Health Care

MRMPO's Transportation Accessibility Model or TRAM was used to assess whether populations living in environmental justice tracts have greater or lesser access to various destinations than the AMPA as a whole. This model provides walking, biking, and automobile time travelled, or distance, along the actual configuration of the transportation network. The model assumes that the sidewalks are present and in good condition and that pedestrians and bikes are not allowed along the Interstate system. The assessment used demographic data from the 2013-2017 American Community Survey in order to compare distribution of amenities and transit investments across the region. Transit accessibility is particularly important for low-income populations as it is a more economical form of travel, improves access to jobs, and is often necessary for getting to work. Approximately 305,000 people, or 34% of the AMPA population live within a 5-minute walk (1/4 mile) of a bus stop. Within a ten-minute walk (or 1/2 mile), this number expands to around 517,792 people, or about 58.5 percent of the total Albuquerque Metro Planning Area.

Access to Transit

As the analysis shows, access to transit for EJ populations in the region is slightly greater than for the rest of the AMPA population. The numbers are close, suggesting equal access, but it is important to consider the difference between equal and equitable. Disadvantaged populations are more dependent on transit service for their transportation needs, so it makes sense that they should be better served by transit than those with less need for it. Analyses such as these can help inform transit planning to bridge the gap between need and equitable access.

Table 4-1: Accessibility of Transit for Populations in the AMPA, 2018

Avg. walk time to nearest Bus stop	Populations in High EJ Scoring Tracts (9 or above)	Percentage of EJ Scoring Tract Population	AMPA Populations (non-EJ Tracts)	Percentage of non-EJ AMPA Population
5 minutes (1/4 mile)	51,505	36%	252,994	34%
10 minutes (1/2 mile)	90,379	63%	427,413	58%

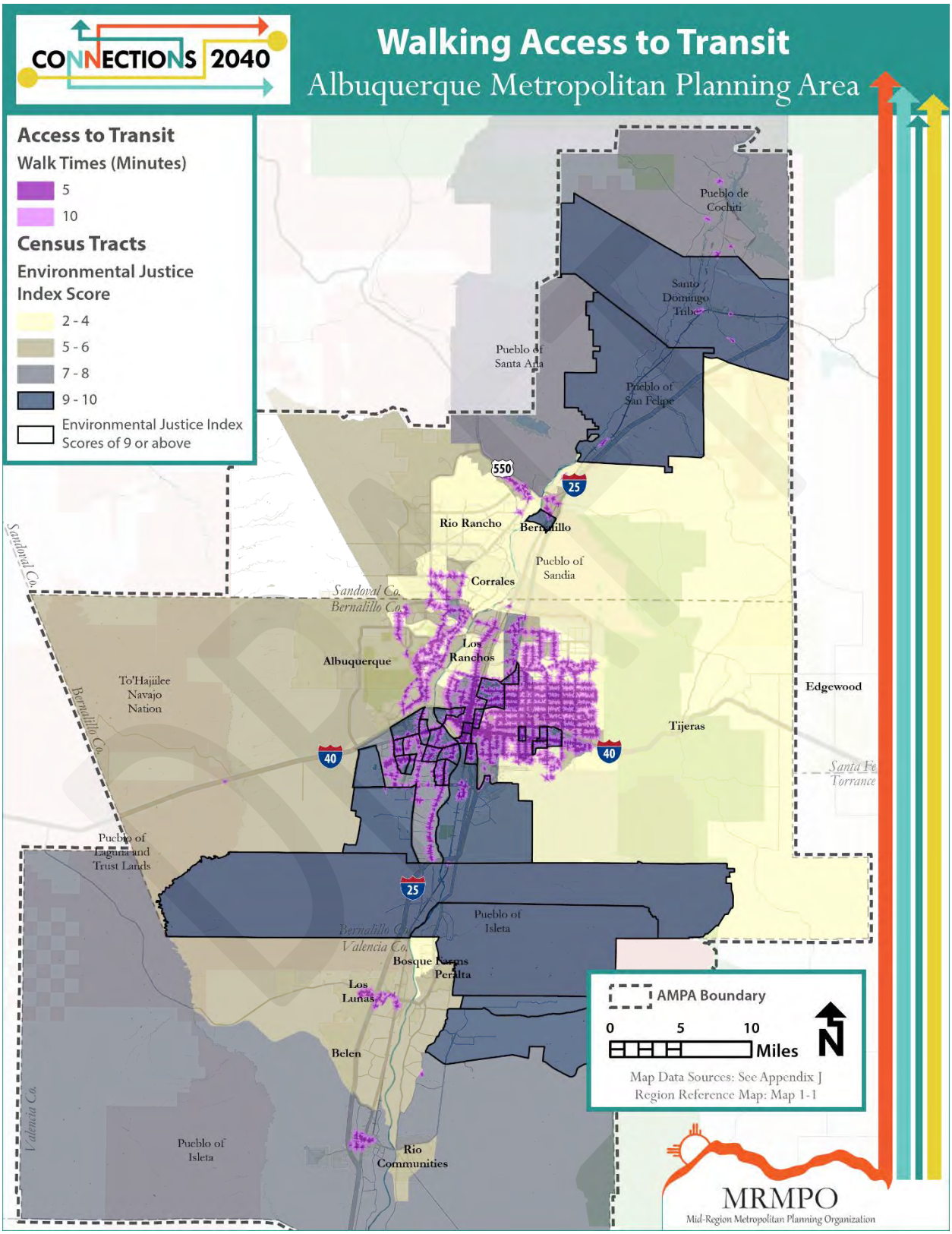
[4] See the Department of Housing and Urban Development Location Affordability Index and the Housing and Transportation Affordability Index developed by the Center for Neighborhood Technologies.

Looked at another way, by the constituent populations of environmental justice tracts – minority populations and those with incomes below the poverty level, the distribution again shows that populations in poverty have greater access to transit than the rest of the AMPA population.

Table 4-2: Transit Access Accessibility of Transit for Populations in the AMPA, 2018

AMPA Minority Population: 534,478		AMPA Non-Minority Population: 350,000	
Within ¼ Mile of Transit Service	34%	Within ¼ Mile of Transit Service	35%
Within ½ Mile of Transit Service	59%	Within ½ Mile of Transit Service	57%
AMPA Population Below the Poverty Level: 147,357		AMPA Population Above the Poverty Level: 737,121	
Within ¼ Mile of Transit Service	40%	Within ¼ Mile of Transit Service	33%
Within ½ Mile of Transit Service	65%	Within ½ Mile of Transit Service	57%

Map 9-2: Access to Transit and EJ Populations



Tree Canopy Coverage

Trees, parks, and natural open spaces are an important element of the urban environment for both physical and mental health. As discussed in the extreme heat and health section of Chapter 7, access to the shade of trees and proximity to cooling vegetation helps to relieve the impacts of exposure to urban heat extremes. Studies show that populations in poverty are most vulnerable to extreme heat, partially because they are more likely to depend on transit and non-motorized transportation, and in doing so endure more exposure to harsh outdoor urban environments.

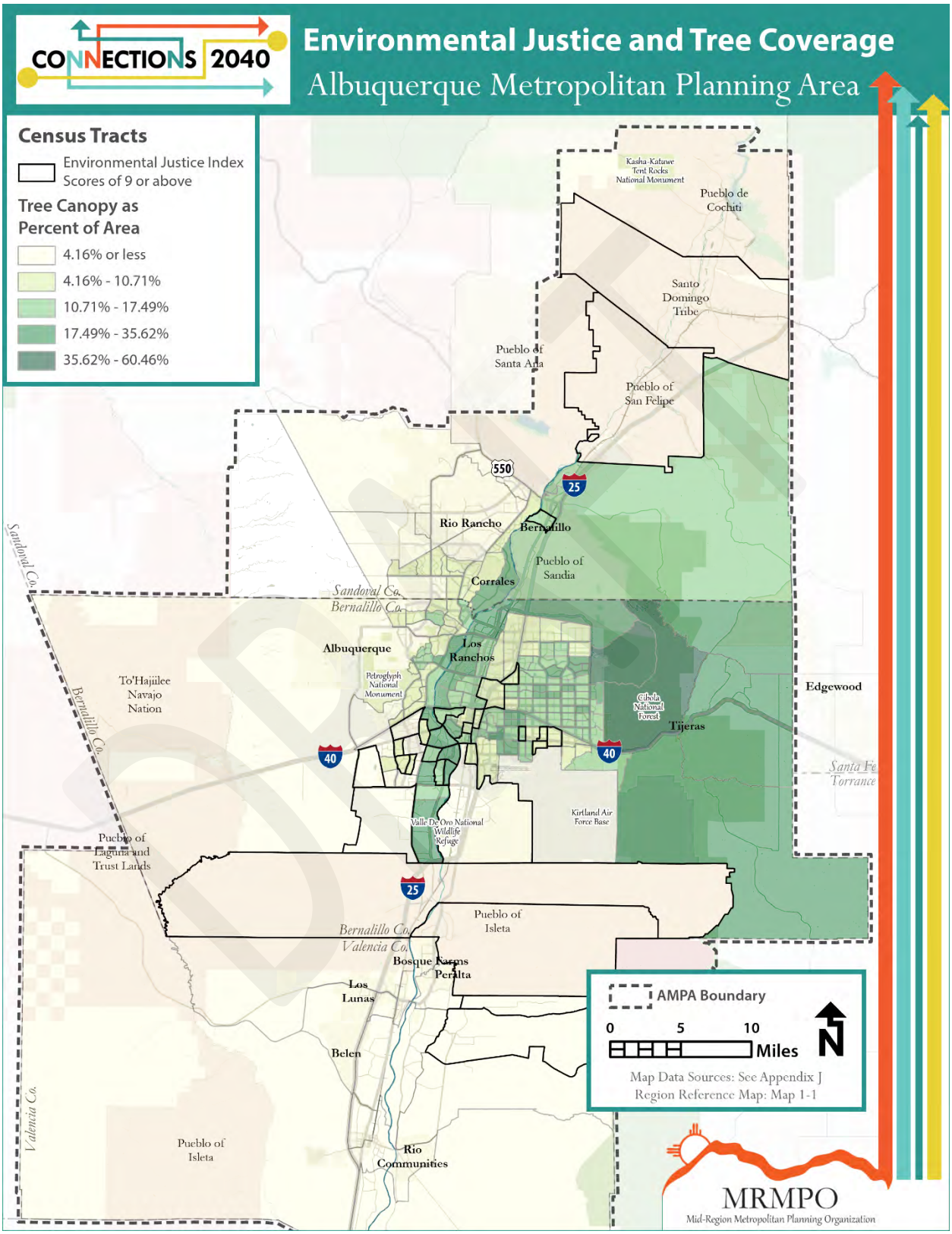
Comparison of tree canopy coverage by census tract was made possible using a digital inventory of the Albuquerque urban area provided by the Nature Conservancy. This was generated from computerized imagery analysis of 4-band 1-meter resolution aerial photographs captured in the summer of 2016 by the National Agriculture Imagery Program (NAIP) using a Classification and Regression Trees (CART) classifier and hand-digitized training data in Google Earth Engine (GEE). This data provides a fair estimate of overall area tree coverage.

Analysis of the data shows that the majority of high EJ-scoring tracts have less than 10 percent tree canopy, whereas the majority of the remaining AMPA tracts have between 10 and 20 percent. Relatively few tracts have greater than 20 percent canopy, and only two of those has greater than 30 percent coverage (large tracts in the Cibola National Forest).

Table 4-3: Tree Canopy Coverage in the AMPA

Tree Canopy Coverage	10% or less	10-20%	Greater than 20%
EJ Scoring Tracts	63%	30%	7%
Non-EJ Scoring Tracts	29%	60%	11%

Map 9-3: Percent Tree Canopy Coverage



Access to Open Space

TRAM analysis of walking access to parks and open space also shows that while the AMPA is rich in outdoor recreation opportunities, higher scoring environmental justice tracts are comparitively lacking in easy access to public outdoor recreation sites. Lack of convenient access to trees and natural environments is an environmental justice issue, as communities without access face disproportionately high levels of chronic disease and poor health outcomes due to decreased air quality, increasing exposure to extreme heat, and lack of outdoor recreation opportunities.

Approximately 55 percent of the population from high scoring EJ Index communities live within a 10-minute walk of a park or open space, while 62 percent for the rest of the AMPA population has comparable access. This analysis included publicly accessible parks and open spaces of the cities, counties, state, and federal agencies for which GIS data was available, and excluded private recreation sites like golf courses and highly "green" agricultural properties of the north valley.

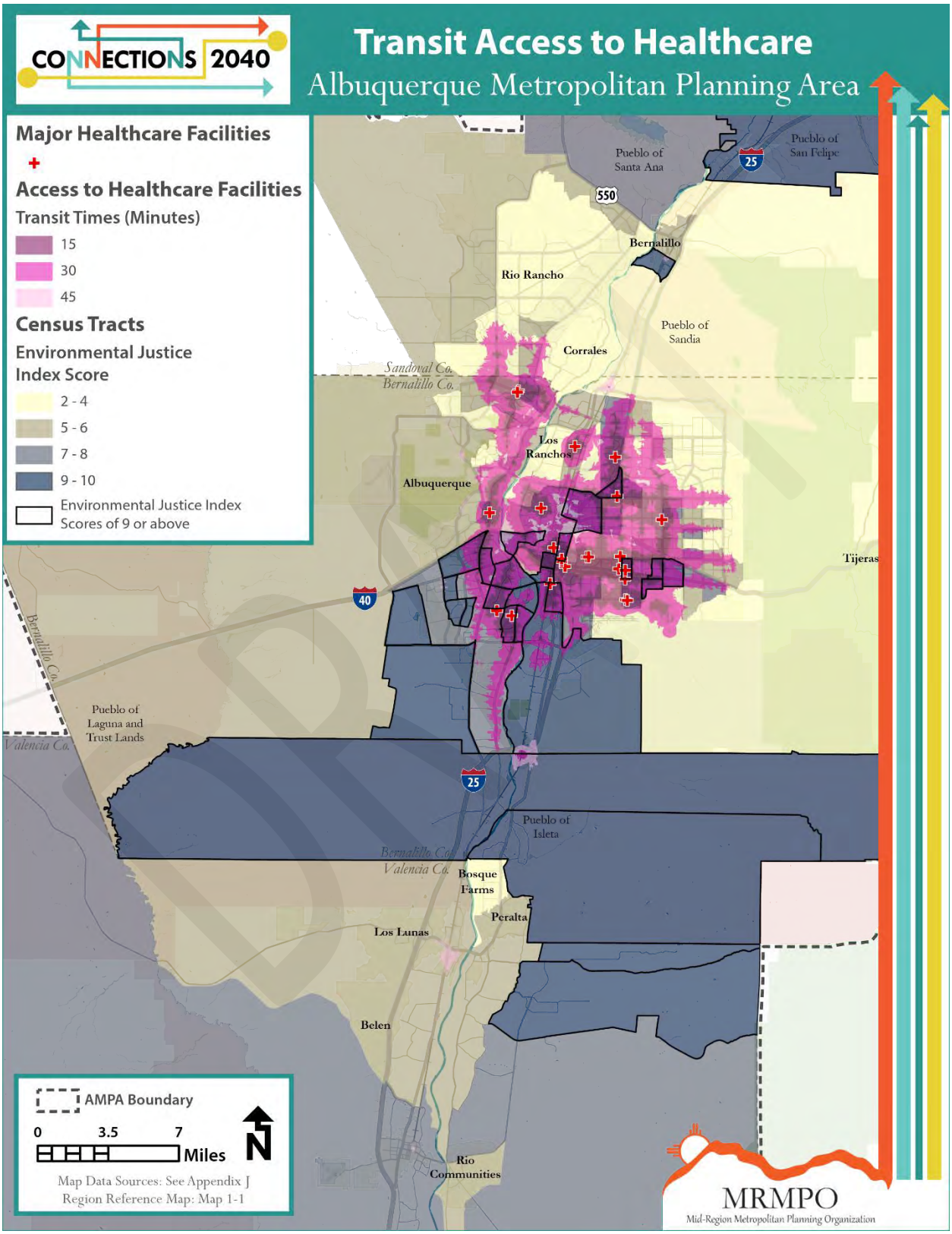
Table 4-4: Accessibility of Outdoor Recreation for Populations in the AMPA, 2017

Avg. walk time to nearest Park or Open Space	Populations in High EJ Scoring Tracts (9 or above)	Percentage of EJ Scoring Tract Population	AMPA Population (non-EJ Tracts)	Percentage of (non-EJ) AMPA Population
5 minutes (1/4 mile)	40,266	28%	231,364	31%
10 minutes (1/2 mile)	78,782	55%	457,453	62%

The largest "holes" in access coverage for high-EJ scoring tracts are the southwest Albuquerque area, the predominantly commercial and industrial areas near I-25 North, and along Central southeast, but there are several other smaller gaps where new parks might be located to increase access for all. Analyses such as these can be useful in prioritizing investments of public funds and working to address fair distribution of these essential urban elements. All efforts to increase tree canopies and convenient access to outdoor recreation should not increase housing costs or displacement in low income neighborhoods.

According to the Trust for Public Land's Parkscore analysis for the City of Albuquerque alone, 87 percent of residents live within a 10-minute walk of home. Compared to the national average of 54 percent, this is doing well. The Parkscore also looks at access by factors like age or ethnicity, and compares overall acreage, investment, and amenities. *See www.tpl.org/city/albuquerque-new-mexico for more details.*

Map 9-4: Access to Open Space and EJ Populations



Accessibility of Healthcare Sites and Facilities

An important intersection between public health and transportation planning is the issue of accessibility of locations and services that are critical for maintaining health. The challenge of reaching medical appointments and clinics was raised as an issue by the public, especially for those living in rural areas and for those who are transit-dependent. In order to investigate this issue further MRMPO analyzed accessibility to health services by mapping transit travel time contours from major healthcare facilities that serve the public and provide healthcare on a regular or short-term basis. All of these facilities provide Medicare services. The facilities include hospitals, medical centers, and federally qualified health centers. These do not include home health services and nursing homes. Data was collected from the Department of Health & Human Services (HHS) and New Mexico Data Collaborative and Bernalillo County Assessor's Office. Socio-demographic information was also incorporated to analyze access for those more likely to need transit service: seniors (over age 65), family households in poverty, and occupied housing units without a car. MRMPO conducted this analysis by using its Transportation Accessibility Model (TRAM).

An important consideration is that this analysis assumes all the mapped facilities are available to the transit user. This needs to be considered when viewing the results because many in the region have limited hospital choices depending on their health care provider and the facilities have varying capacities and abilities to serve potential clients. Despite this limitation, the analysis gives a reasonable view of general accessibility patterns in the region.

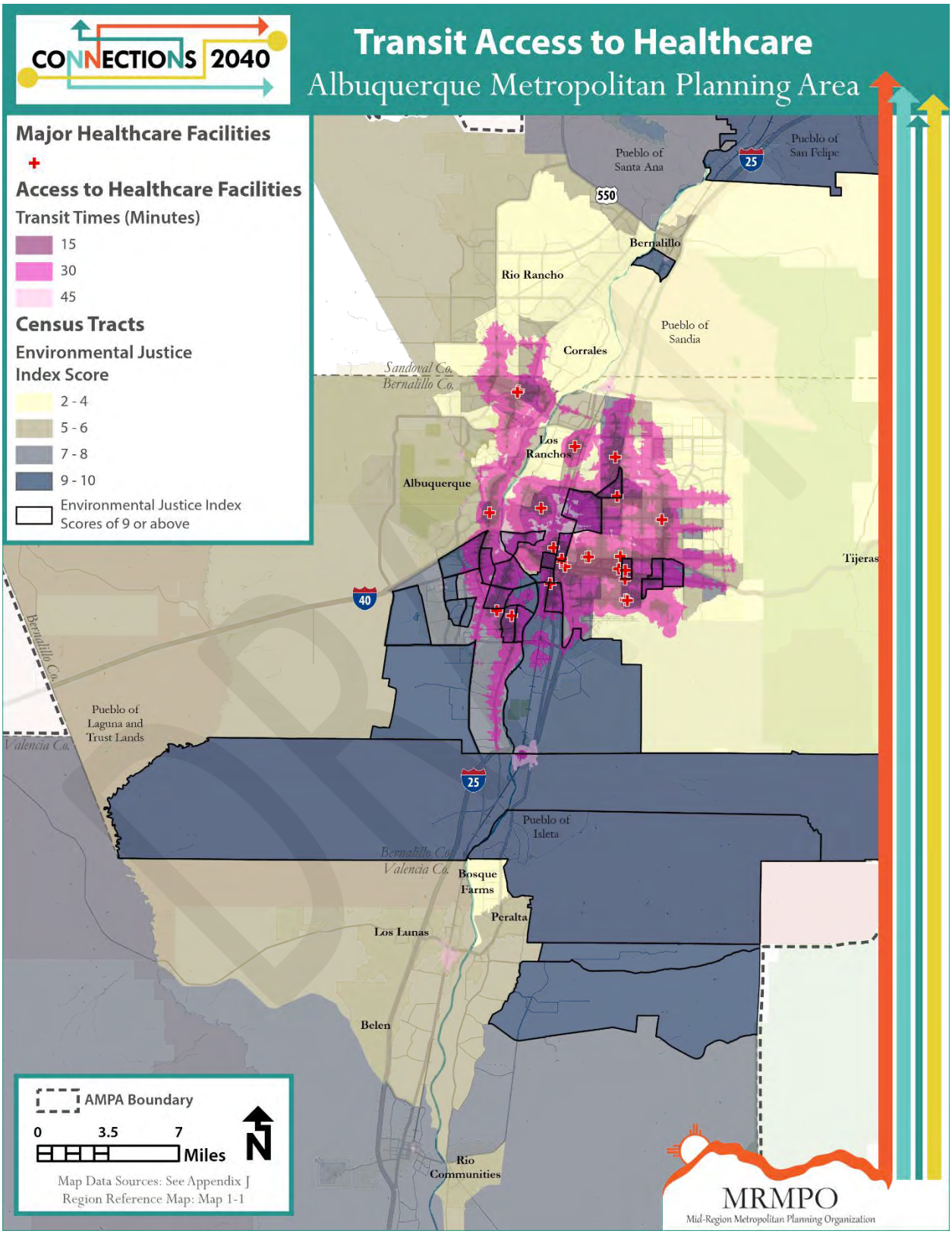
The TRAM analysis shows that access to major healthcare facilities via transit takes less time for people living in Albuquerque's central and southeast areas, particularly in areas along Lomas Blvd and in the NE along Montgomery Blvd to Wyoming Blvd, as well as areas congruent to North I-25. On the Westside, people living in areas near the Bernalillo / Sandoval County line and to a somewhat lesser degree, areas along Coors Blvd near I-40 have shortest travel times to major healthcare facilities. Compared to the same analysis completed for the last MTP, the people living in the South Valley have much shorter travel times to major healthcare facilities via transit due to new facilities being located on the West side and an increase in transit routes and stops.

Using socio-demographic data to gather travel contour statistics allows for comparison of access to major healthcare facilities via transit between certain segments of the population and the region. There is little difference in transit access to hospitals for residents who are over 65 compared to the total population in the AMPA. However, a higher percentage of households in poverty live within the transit contours compared to total households in the region. Likewise, the contour statistics show that occupied housing units with no vehicle have better access than total occupied housing units in the region, meaning that populations most likely to depend on public transit are better served in terms of access to medical facilities. These findings are consistent with studies showing relatively good access to transit among seniors and low-income residents in the AMPA.

Table 4-5: Accessibility of Major Healthcare Facilities by Transit

	% of Total Pop	Households with 65 and Older	Total Occupied Housing Units	Occupied Housing Units with No Vehicle	Households in Poverty	Households not in Poverty	EJ Population	Non-EJ Population
Within 15 Minutes Transit Time	19%	18%	21%	39%	28%	19%	27%	17%
Within 30 Min Transit Time	45%	46%	48%	72%	57%	46%	52%	43%
Within 45 Min Transit Time	46%	48%	49%	73%	58%	48%	55%	43%

Map 9-5: Accessibility of Major Healthcare Facilities by Transit



c. MRMPO Public Outreach

MRMPO offers opportunities to participate in the planning process in different locations across the AMPA to help ensure no geographic area is excluded from its public participation efforts. With respect to engaging communities of Limited English Proficiency, MRMPO translates many of its documents into Spanish (e.g., surveys and the Title VI Plan) and provides contact information in Spanish on its website. Despite MRMPO's efforts at public outreach, there remains much work to be done in terms of engaging the general public, and particularly environmental justice communities, in the transportation planning process. Increased participation leads to better transportation decisions and outcomes for all.

MRMPO continues its efforts for engaging environmental justice and other disadvantaged, special needs, and underrepresented populations. New outreach strategies have been employed by MRMPO staff. For the *Connections 2040 MTP*, MRMPO attended community events and existing organizational meetings, paying particular attention to environmental justice communities, in an attempt to gather more feedback from low-income and minority populations. This was a part of an overarching change in outreach that focused on attending events and meetings that are already on-going, as opposed to inviting people to attend meetings that MRMPO staff held. Often, community members do not have any more time in their day to fit in another meeting, so MRMPO staff is visiting these communities as well. In addition, more participation from younger adults was sought as participation from this age group has been low in MTP public outreach efforts. MRMPO will also perform its planning activities through an equity-minded lens, ensuring adverse effects on low-income and minority populations are avoided, or at least minimized or mitigated.

9.4 Recommended Strategies and Projects for Achieving the MTP Goals and Target Scenario

The following tables are a summary of the key strategies and projects for achieving the MTP goals and principles of the Target Scenario. They provide regional stakeholders and decisionmakers with guidance on ways to achieve the benefits of the Target Scenario and meet the goals of the MTP. The strategies and projects are intended to move the region toward the Target Scenario and are a foundation for addressing long-term regional needs. It is up to individual jurisdictions to identify which strategies are most appropriate for them to pursue implementation of at the local level, and MRMPO can help assist with these efforts as necessary and appropriate.

Key Strategies for Meeting the MTP Goals

[Create and insert table of strategies mentioned in the document, categorized, and possibly prioritized?]

Key Strategies for Meeting the Principles of the Target Scenario

[Create and insert table of strategies mentioned in the document, categorized, and possibly prioritized?]

Staff Recommended Projects for Achieving the MTP Goals and Target Scenario

[Create and insert table with top projects that scored well in the MTP review process and that staff believes will help achieve MTP goals and Target Scenario].

9.5 Next Steps

The role of the MTP and the metropolitan transportation planning process is to identify regional needs and assist member agencies in the development of transportation infrastructure decision-making. Each plan is another step towards a more complete and coherent understanding of the overarching challenges – transportation and otherwise – facing the region and the strategies that best address them.

The MTP is updated regularly, which helps it remain a relevant and meaningful resource for member agencies and the general public. The process and methodologies are themselves being constantly revised as new information and ideas emerge. While the *2035 MTP* explored the critical link between land use and transportation, the *Futures 2040 MTP* took the next step to investigate the relationship between development patterns and transportation, economic, and environmental outcomes through its scenario planning process. The *Connections 2040 MTP*, the update to the *Futures 2040 MTP*, focuses on identifying and prioritizing gaps and improving connections in the transportation network across the region.

The MTP will be updated again in five years and will contain new projections and analysis. For the time in between the approval of the *Connections 2040 MTP* and the next update, MRMPO has identified several activities to pursue as well as opportunities to advance its tools and analytical capabilities. These steps should help to better inform transportation investment and land use policy decisions. As always, these are regional efforts and will require participation from member agencies throughout the AMPA. These next steps may include:

- Additional scenarios modeled for comparison purposes (e.g., comparing conditions with the addition of a hypothetical bridge, no new infill development, etc.)
- New technologies researched and explored further (e.g., connected and autonomous vehicles, “smart cities” and sensors, etc.)
- Freight travel studied and freight corridors revisited
- Greater use of fiscal impact tool to examine full costs of transportation projects
- Refinement of MTP project selection process (develop process where projects align more closely with goals and Target Scenario)
- Re-visitation of MTP goals and pathways
- Integration of bicycle and pedestrian count data
- Evaluation of progress toward performance measures targets and changes made in response to findings where necessary
- New (2020) Census findings and integration into the MTP
- Revised Project Prioritization Process (e.g., simplification of tool, change to GIS-based, and linked to national goals)